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| EXAMINER SALZMAN, KOURTNEY R | | | | |
| ART UNIT 1724 | | PAPER NUMBER | | |
| NOTIFICATION DATE 03/28/2011 | | DELIVERY MODE ELECTRONIC | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com
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Office Action Summary

Application No.

10/547,191

Applicant(s)

SCHEIBLE ET AL.

Examiner

KOURTNEY R. SALZMAN

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-912)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 27, 2010 has been entered.

Response to Amendment

2. Claims 1, 2, 6 and 7 have been amended.
3. Claims 1-11 remain pending and have been fully considered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1- 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. Claim 1 recites the limitation "the pipeline" in lines 5, 6, 12 and 14. There is insufficient antecedent basis for this limitation in the claim.

b. Moreover, claim 6 recites the limitation "the pipeline" in lines 5 and 11. There is also insufficient antecedent basis for this limitation in the claim.

i. If the intention is to have multiple pipelines carrying multiple process media streams, then the claim needs to be clear if the intention is to have sensors, thermoelectric transducers, etc in every pipeline or if they would only be in one pipeline. Moreover, please point out in the specification where multiple pipelines are discussed with multiple parts attached and integrated within, as it is not immediately clear to the examiner, if this is the intended interpretation. If the intention it to just have the sensor and thermoelectric etc on one pipeline of a group which exist in the area, this too needs to be made clear in the claim language. Please also cite support from the specification in your response when this is clarified.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
7. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over ABB et al (DE 201 07 112), in view of BOCKO et al (US PG PUB 2002/0145538).

Regarding claims 1 and 6, ABB et al teaches a field device 1 comprising a housing 1 and pipeline 2 carrying process media in a first direction (as indicated by the arrow) to thermoelectric transducer 14 with wireless communication interface 12 and 121. Regarding the newest limitation of claim 1 requiring the transducer to power the field device, the same structural requirements are provided in reference ABB et al as are required by the claim limitations of the

instant application. Inherently, since the same structure is present, the same operation is possible. Moreover, the use of the power is irrelevant to the structure of the apparatus itself, as in claims 1 and 2, as it is not a structural feature which would carry weight or distinguish ABB et al from the instant application structure. Regarding the requirement for the transducer to power the field device, since the power is generated in the transducer and the transducer is included in the field device, power is supplied to the field device. An opening is shown to be formed in the pipeline where temperature sensor 13 is inserted in the figure as well. The insertion of the sensor is perpendicular to the first direction as shown in figure 1 as well.

While ABB et al teaches the thermoelectric transducer to comprise a face parallel to the pipe on the bottom of the transducer which faces the process while another face of the transducer which also runs parallel to the pipe but on the top of the transducer faces away from the process, the transducer is not shown to the outside of the pipe.

BOCKO et al teaches a field device comprising a housing (paragraph 77), process media to create heat in base 22, and wireless data link 120 of figure 12. Figure 12 of BOCKO et al is shown below to identify the transducer faces facing away and toward the process. The base is interpreted to be the process with the process media contained inside.

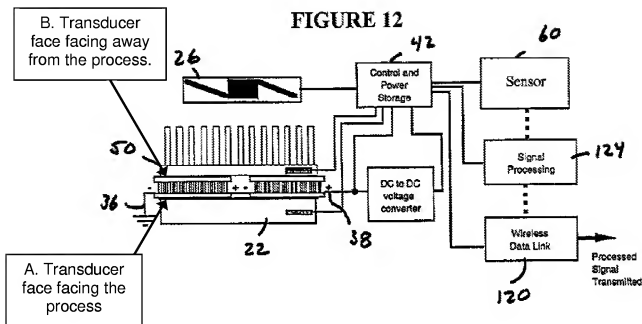


FIGURE 12 of BOCKO et al.

As noted in the figure above, face A of the transducer faces the process while face B of the transducer faces away from the process. All sides other than face A of the transducer are situated facing away from the process. For example, the fan (26), control and power storage (42), sensor (60), signal processing (124) and wireless data link (120) are all situated facing away from the process while the base (22) and face A of the transducer are all situated facing the process.

Regarding requiring the transducer to power the field device, the same structural requirements are provided in reference BOCKO et al as are required by the claim limitations of the instant application. Inherently, since the same structure is

present, the same operation is possible. Moreover, the use of the power is irrelevant to the structure of the apparatus itself, as in claims 1-5, as it is not a structural feature which would carry weight or distinguish BOCKO et al from the instant application structure. Regarding requiring the transducer to power the field device, as in claim 6, since the power is generated in the transducer and the transducer is included in the field device, power is supplied to the field device.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to place the thermoelectric of ABB et al outside the process media container or pipeline, as in BOCKO et al, because BOCKO et al shows that not having direct contact of the thermoelectric with the temperature generating material is effective at generating electricity from the temperature differential as stated in the abstract. It is obvious to place the thermoelectric device anywhere around or in the process device because as long as there is some heat transfer from the process media the thermoelectric will generate power.

Regarding claims 2 and 7, the thermoelectric converter of ABB et al is described in the specification to utilize the temperature difference between point 141 and 142, regardless of the site where the colder or hotter temperature is occurring. This is also the inherent operation of thermoelectric converters. Moreover, while figure 12 shows a hot and cold side discretely, it is through the design of the module that these sides are determined, not that the structure of the

thermoelectric converter prevents a different hot and cold orientation. Therefore, it is inherently possible for the thermoelectric converter to function in either directional heat flow, as the structure for both operations is equivalent.

Regarding claims 3, 4, 8 and 11, BOCKO et al shows in figure 12 and discusses in paragraph 54, for the fins on side 50 to function as a radiator or heat sink. Paragraph 77 of BOCKO et al also describes all the pieces as being inside the housing.

Regarding claim 5, BOCKO et al teaches power storage and a controller in reference number 42.

Regarding claim 9, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the power system is shown to be connected to the wireless interface in figure 12.

Regarding claim 10, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the rate of power change (and in turn the rate of temperature change) is monitored by the controller or central control.

Response to Arguments

8. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

c. The applicant states in the remarks that the combination of BOCKO et al and ABB et al is not sufficient to teach all the aspects of the claim, yet this amounts to an allegation with no other support.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KOURTNEY R. SALZMAN whose telephone number is (571)270-5117. The examiner can normally be reached on Monday to Thursday 6AM - 4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/
Supervisory Patent Examiner, Art Unit 1753

Krs

3/23/2011